## **REMARKS**

The claims are amended for the purpose of eliminating multiple claim dependencies.

A marked-up version of the claims, which indicates all amendments made, is submitted herewith.

None of the amendments introduces new matter.

An early and favorable examination is earnestly solicited.

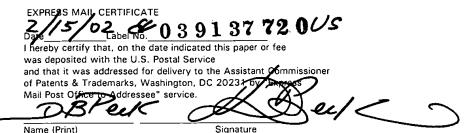
Respectfully submitted,

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Date: February 15, 2002



File No: 4634/0K253US0

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Adrian Lionel GRAY

Serial No: T/B/A (U.S. National Phase of PCT/ZA00/00136,

filed August 16, 2000)

Filed: Concurrently Herewith

For: METALLURGICAL THERMOCOUPLE

## MARK UP TO PRELIMINARY AMENDMENT

Hon. Commissioner of Patents and Trademarks Washington, DC 20231

Attn.: Box PCT, RO/US

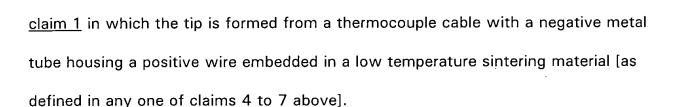
Sir:

Prior to examination, Applicants wish to amend the above-identified application as follows.

## **IN THE CLAIMS**

Please delete claim 17 and amend claims 5, 7-10 and 12-15 as follows:

- 5. (Amended) A thermocouple as claimed in [any one of the preceding claims] claim 1 in which refractory material includes particulate borosilicate and boric acid powder.
- 7. (Amended) A thermocouple as claimed in [claims 5 or 6] <u>claim 5</u> in which the boric acid comprises about 3% to 5% weight of the refractory material.
- 8. (Amended) A thermocouple as claimed in [any one of claims 5 to 7] claim 5 in which the boric acid content of the refractory material is about one half of the borosilicate content.
- 9. (Amended) A thermocouple as claimed in [any one of claims 2 to 8] claim 2 in which the tubes of the sheath are stainless steel.
- 10. (Amended) A thermocouple as claimed in [any one of claims 2 to 9] claim 2 in which the refractory material is predried at a temperature of between 135° and 150°C.
- 12. (Amended) A thermocouple as claimed in [any one of claims 2 to 11] <u>claim 2</u> in which the refractory material is beaded before being formed into the sheath.
- 13. (Amended) A thermocouple as claimed in [any one of the preceding claims]



- 14. (Amended) A thermocouple as claimed in [any of the preceding claim 1 to 12] claim 1 in which the tip is formed by providing a hot junction from the wires of the thermocouple cable and supported by a sheath as above defined with both tubes and the refractory formed to cap the hot junction.
- 15. (Amended) A thermocouple as claimed in [any one of claims 2 to 14] <u>claim 2</u> in which the outer tube of the sheath is annealed after the constriction process and the refractory material at least partially sintered during the annealing process.
- [17. A thermocouple substantially as described and illustrated in Fig. 1 of Fig. 2 of the accompanying drawings.]

Please add the following new claims 18-21:

- 18. A thermocouple as claimed in claim 2 in which refractory material includes particulate borosilicate and boric acid powder.
- 19. A thermocouple as claimed in claim 6 in which the boric acid comprises about

3% to 5% weight of the refractory material.

- 20. A thermocouple as claimed in claim 6 in which the boric acid content of the refractory material is about one half of the borosilicate content.
- 21. A thermocouple as claimed in claim 7 in which the boric acid content of the refractory material is about one half of the borosilicate content.